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Report includes discussions of: Background of present vocational system in Wisconsin, trends in manpower resources of the Nation, the manpower future in Wisconsin, enrollment trends in Wisconsin schools of vocational and adult education, and means of financing programs of vocational and adult education. Summary concludes that Wisconsin schools of vocational and adult education are developing educational services comparable in many ways to those offered in States with established junior college systems.

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WISCONSIN STATE BOARD OF VOCATIONAL AND ADULT EDUCATION
Madison, Wisconsin
C. L. Greiber, State Director

DATA PRESENTED TO THE COORDINATING COMMITTEE FOR HIGHER EDUCATION IN WISCONSIN

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education

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August, 1957

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ED000229

VOCATIONAL AND ADULT EDUCATION IN WISCONSIN AND ITS RELATION TO ALL PHASES OF EDUCATION BEYOND THE HIGH SCHOOL

Introduction

Planning for the future in post-secondary vocational education demands a reflection of the current and future economic and social trends affecting the work and life of the American people. Any attempt to fashion the direction which vocational education should take "should reflect the activities of the American people, the changes which take place in the development of the country, and the circumstances surrounding the struggle of the American people to secure economic well-being."[1] This in turn means consideration of a number of major factors in the planning of the program itself. The factors must include the scope of the entire program embracing instruction in the various fields of business, industry, agriculture, sales, guidance, and homemaking. Careful thought should be given to finance, research, personnel requirements, and physical facilities. However, before conclusions on these matters can be reached, emphasis should be given to trends in population, manpower needs, present and future enrollments and their implications.

In reviewing the effects of the rapidly changing technological age on vocational education as it attempts to meet the needs of the American people, it has been necessary to develop a report involving national as well as state and community matters. In many cases the national picture is more clearly depicted than the state or community. Emphasis is placed on the importance of the translation of these developments in terms of state and individual communities.

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[1] U. S. Office of Education, Vocational Education in the Years Ahead. Bulletin 234, Washington, D. C. 1945.

Background of the Present Vocational System in Wisconsin

The Wisconsin Program of Vocational and Adult Education was established by the 1911 session of the legislature and was the first state-wide system of vocational education in the United States. The initial legislation provided for state and local boards of vocational and adult education and for mandatory mill tax levies to insure local support of the program. The State Board was originally composed of nine members; three employers, three employes, the dean of the University School of Engineering, the dean of the Extension Division of the University, and the State Superintendent of Schools. The board during the first six years was designated as advisory to the State Superintendent of Schools and had no administrative power or authority.

In 1917 federal aids for vocational education were authorized and appropriated under the provisions of the Smith-Hughes law. This federal act required the state to establish or designate a state board to administer the federal funds allotted for vocational education. The Wisconsin legislature in accepting the provisions of the federal act designated the State Board of Vocational and Adult Education as the board to administer federal aids for vocational education. The board was also given administrative power and authority and its membership was changed to include eleven members; three employers, three employes, three farmers, a member of the Industrial Commission, and the State Superintendent of Schools.

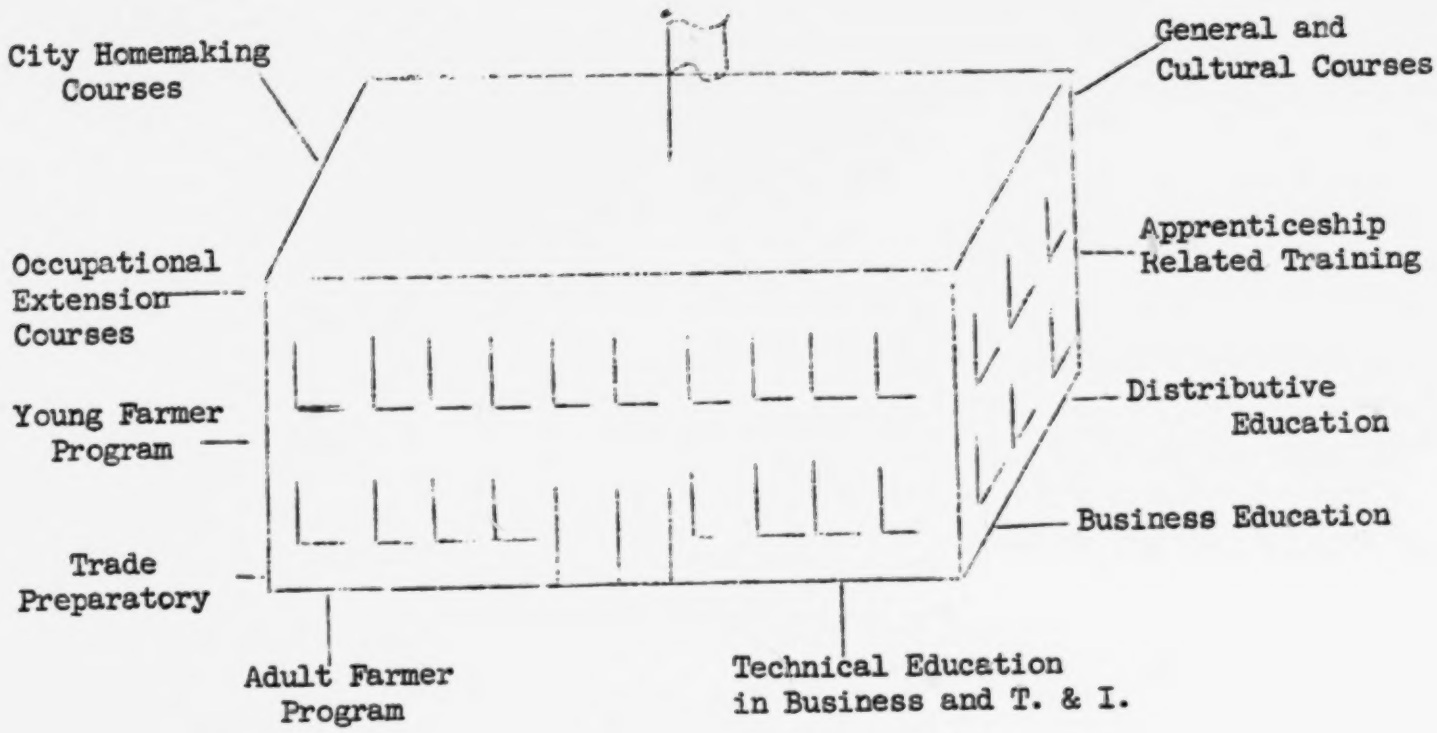
The basic law enacted in 1911 also provided for local boards of vocational and adult education composed of five members. Membership of such boards was composed of two employers, two employes and the chief school officer of the city in which the school was established.

One of the basic principles which has characterized the program has been flexibility in order that changing needs of the community and the state might be met. During the 1930's training was provided for the unemployed so that they might again become employable. During World War II an extensive war training program was carried on in order to train workers for defense industries. During the years since World War II training programs have been carried on for returned veterans.

Today the vocational schools have organized much of their educational planning with the objective of developing opportunities for youth and adults who seek suitable post-secondary education of a non-collegiate type. As shown in Chart 1, the vocational schools provide a continuing education program in various areas.

CHART 1

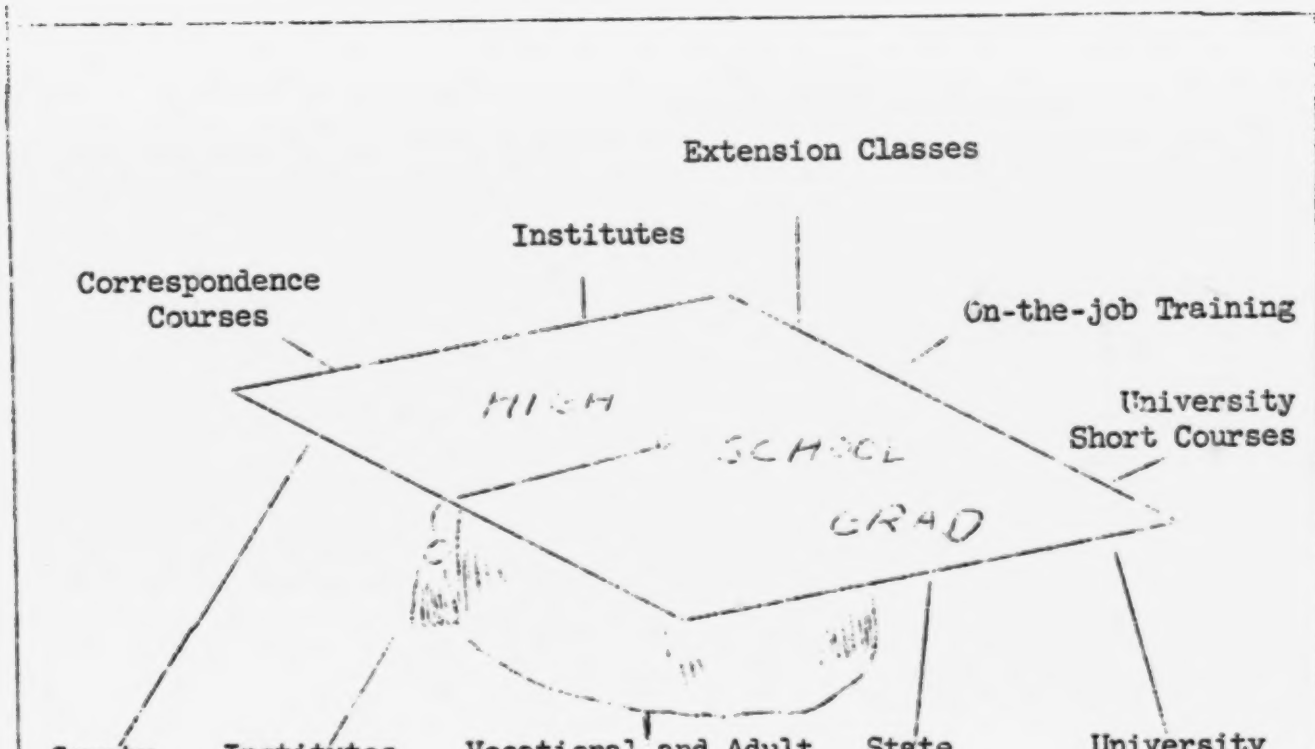
Adult Avocational Courses



Existing public educational facilities provide a broad field of opportunities for the full or part-time continuation of an education beyond the high school.

The sixty vocational schools in the state are an integral part of these educational opportunities (Chart 2).

CHART 2



SOURCE: Report of the Commission on Improvement of the Educational System, Part Four - Basic Information. Madison, Wisconsin March, 1949

The educational facilities provided are vocational, avocational, technical, general and cultural in scope. Closely correlated within the training opportunities is an on-the-job training program partially through apprenticeship and related training and also on-the-farm training. In Milwaukee, substantial opportunity for college level work is also provided.

MANPOWER AND VOCATIONAL EDUCATION

In planning for education in the future it is pertinent that consideration be given to significant trends and developments of our manpower resources. These developments and trends certainly are affecting the entire field of education.

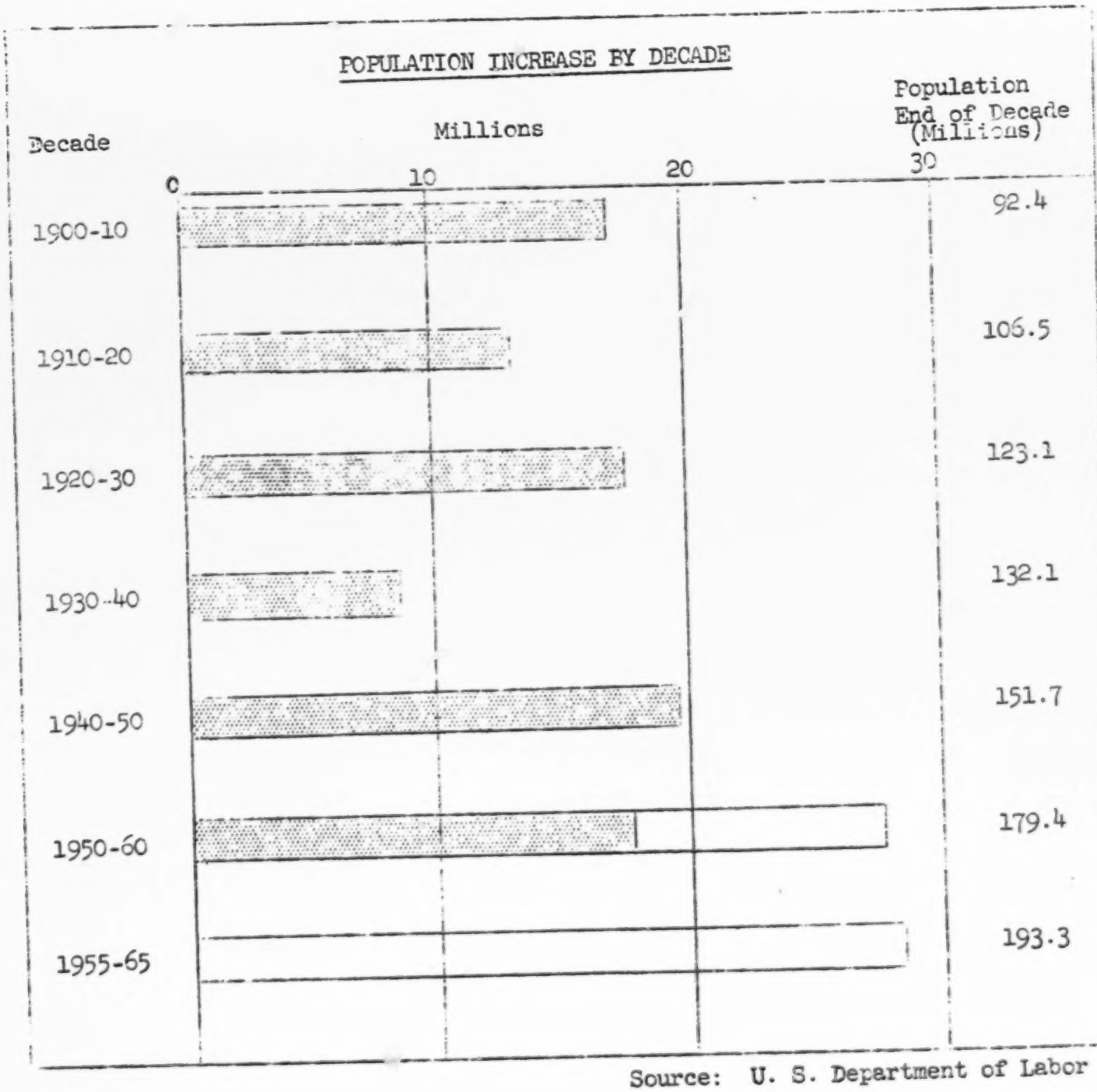
Technological developments in the years ahead will demand a labor force possessing a high degree of skill and creativeness. Vocational education, as one facet in the over-all field of education, has the responsibility of training people for skills.

The following facts of the past and projections for the future depict anticipated changes in our population and labor force during the next 10 years, and point out some of the implications for our educational system, our industrial training programs, and our plans for manpower utilization. It must be kept in mind that all projections are based on the assumption of a continuation of the present peacetime economy.

THE MANPOWER FUTURE FOR THE UNITED STATES - 1955-65

On July 1, 1956 the population of the United States reached 168 million. Since the beginning of the 20th century, our population has grown 92 million, a 121 per cent increase.

CHART 3



Source: U. S. Department of Labor

Fluctuations in the birth rate over the past 25 years largely determine the size of the various age groups within our total population - at the present time and for years to come.

Today most of our children begin their formal schooling at age 5 or 6. Most continue through high school (age 14-17). An increasing number go on to college (age 18-21). Many follow college with graduate work (up to age 24).

In 1945 one out of every four persons was between 5 and 24 years of age. Today the ratio is nearly one out of three. In 1965 almost 37 out of every 100 will be in these age groups.

The number of children between 5 and 13 years increased from 19.4 million in 1945 to 28.1 million in 1955; by 1965 they will rise to 35.7 million.

In 1945 there were 9.1 million boys and girls between the ages of 14 and 17 years. There was practically no increase in this age group over the past 10 years. But, between 1955 and 1965, their number will increase by more than 5 million - from 9.2 to 14.3 million.

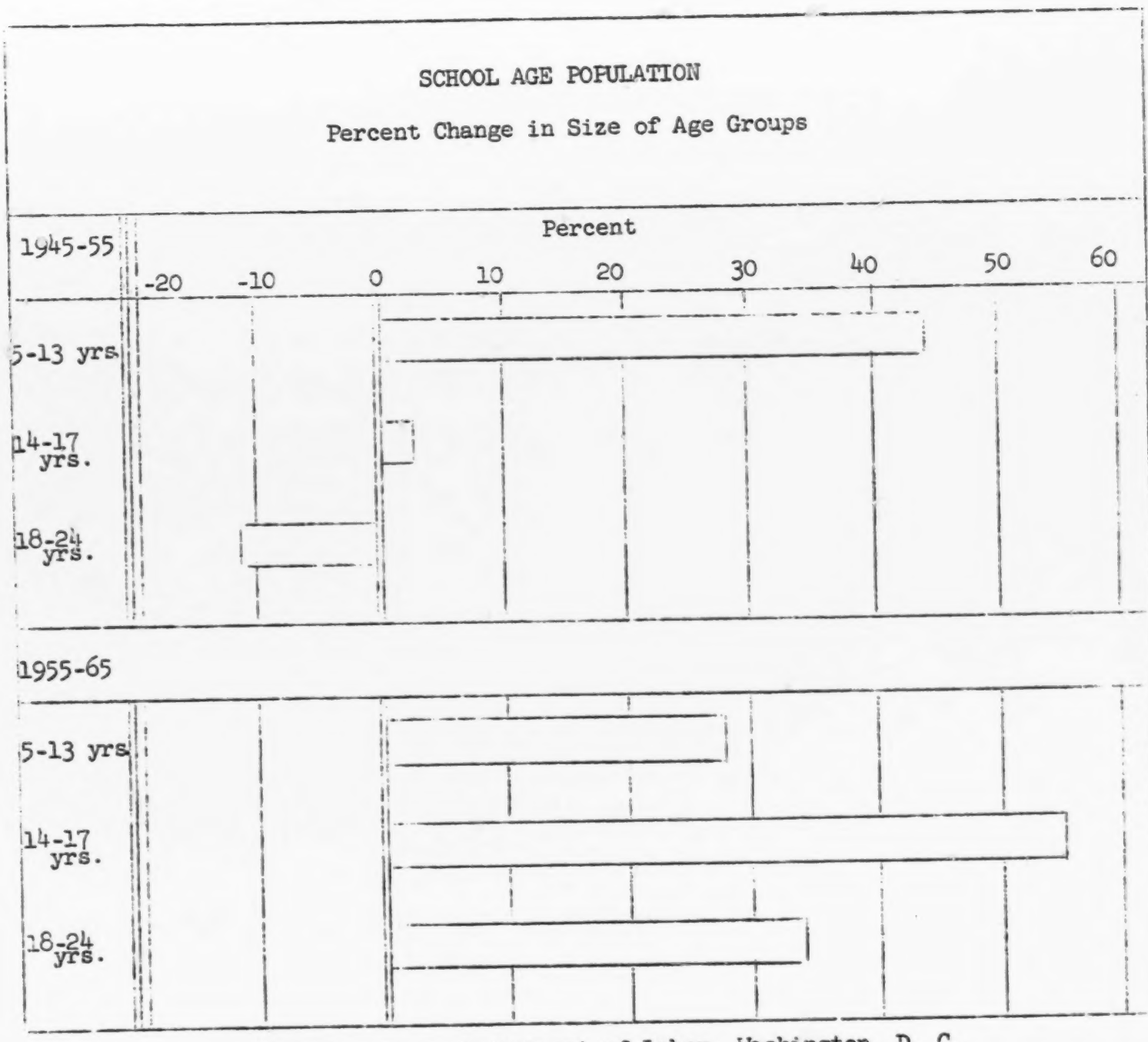
The number of young men and women between 18 and 24 actually declined over the past decade - from 16.8 million to 15.1 million. In the next 10 years, however, this age group will expand by nearly 5 million.

These changes in the size and age composition of our youth population have important implications for our educational system.

CHART 4

SCHOOL AGE POPULATION

Percent Change in Size of Age Groups



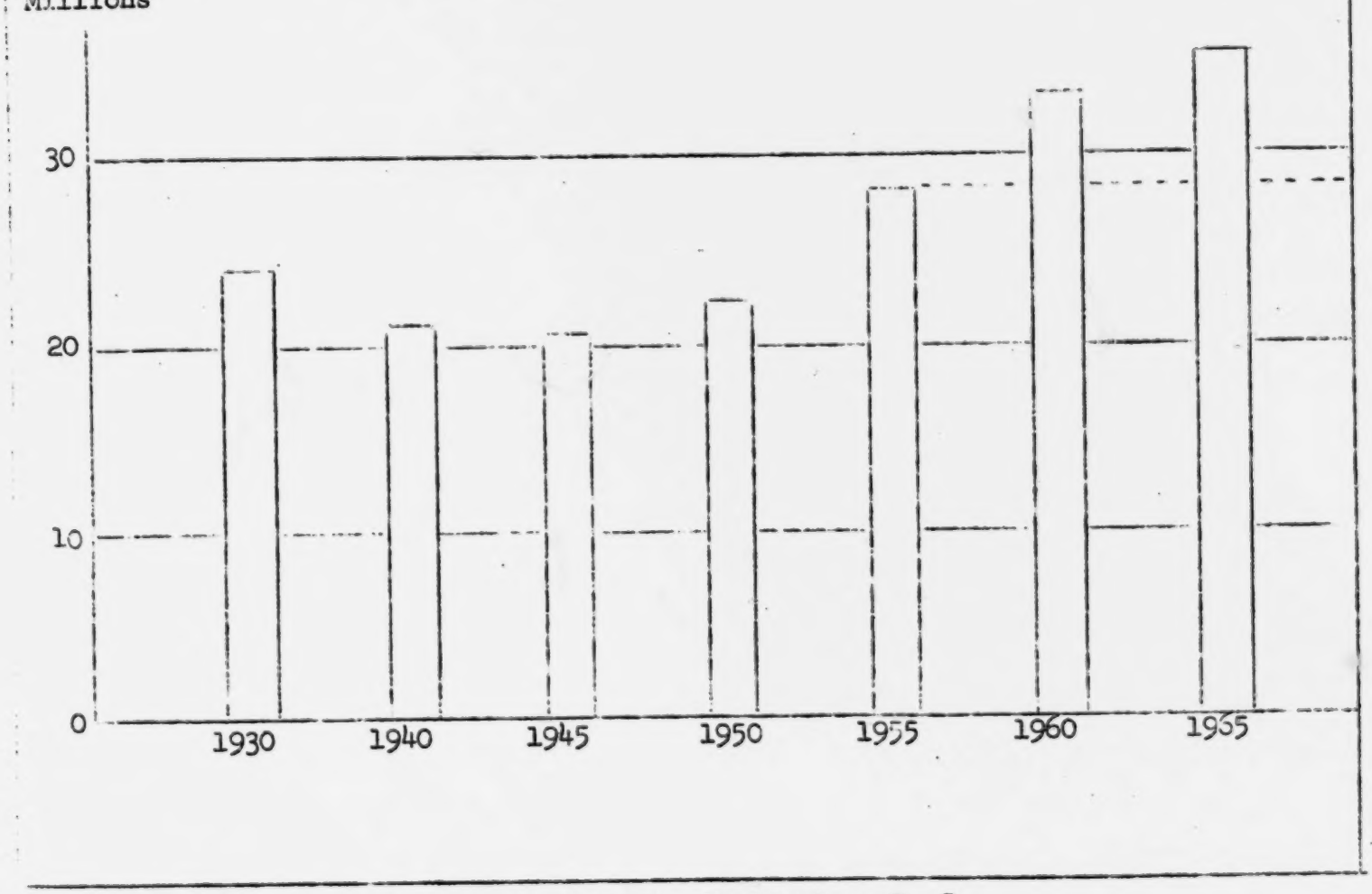
SOURCE: U. S. Department of Labor, Washington, D. C.

Enrollments in the elementary grades totaled 23.7 million in 1930. By 1945 this had fallen to 20 million because of the low birth rates in the 1930's. Between 1945 and 1955 elementary enrollments increased 38 per cent to 27.7 million. By 1965 they are expected to soar to 35.7 million.

This increase of about 16 million from 1945 to 1965 has terrific impact on future educational planning in post high school vocational education.

CHART 5

ELEMENTARY SCHOOL ENROLLMENTS (Including Kindergarten), 1930-65

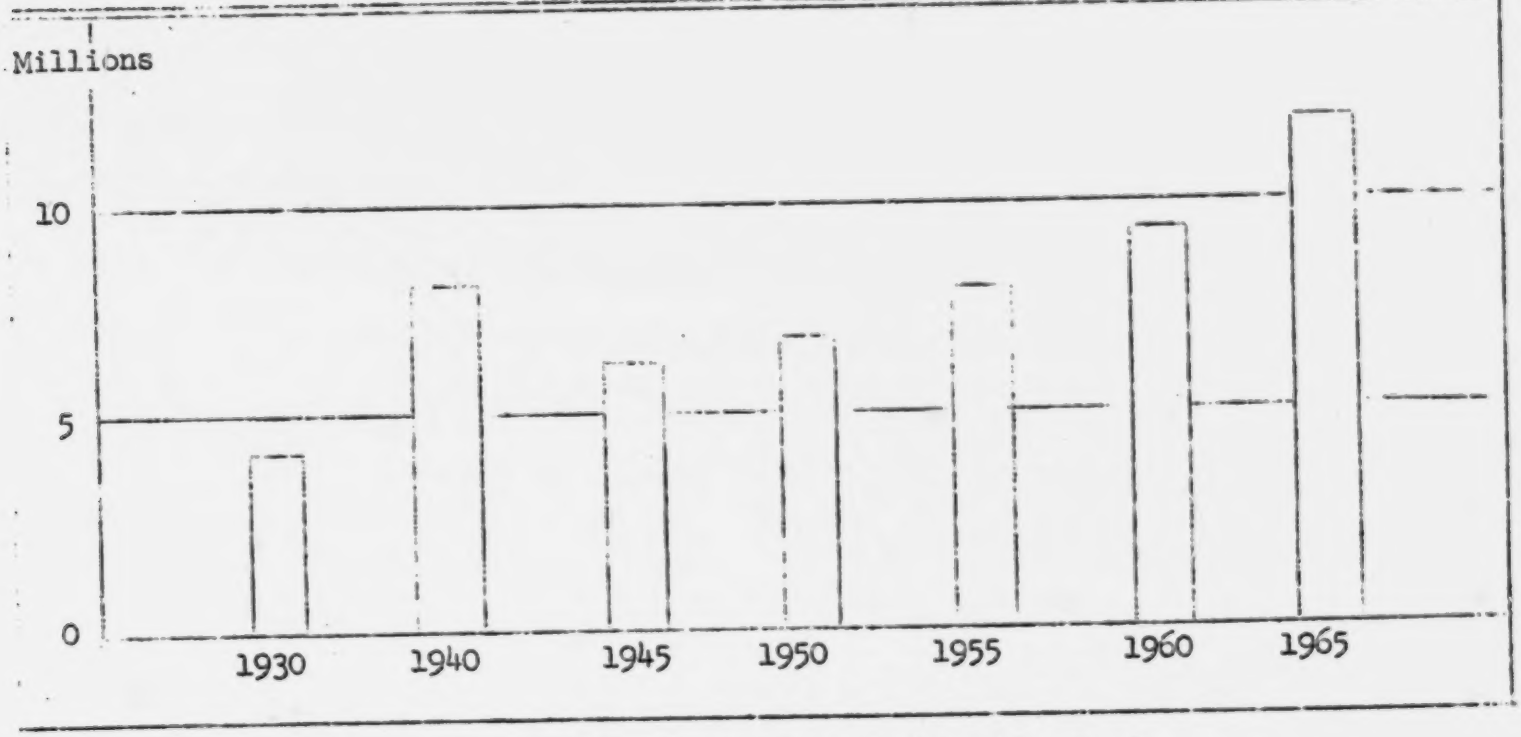


SOURCE: U. S. Department of Labor, Washington, D. C.

During the next years, high school enrollments are expected to rise 11.9 million - a whopping 60 percent increase.

CHART 6

SECONDARY SCHOOL ENROLLMENTS, 1[illegible]-65



SOURCE: U. S. Department of Labor, Washington, D. C.

In 1955, 32,133 students graduated from the public schools in Wisconsin. According to reports filed with the State Superintendent, 10,244 (31.9 per cent) enrolled in college in the fall of that year.* If we look at the increase on the national picture, we can pretty well predict the increase in Wisconsin graduates by 1965. We can also assume that even though the percent of students enrolling in colleges rises, there will be a certain percent enrolling in post high school vocational programs and on the basis of present

*The Wisconsin Coordinating Committee for Higher Education, Who Goes to College, Background Study IV. March, 1957.

enrollment an increase in enrollment in the years ahead can be expected.

The need for college trained people has increased greatly during recent years. Graduates of institutions of higher learning produce the scientists, engineers, physicians, and many other professional people upon whom depend the future technological development and the health and welfare of our population.

Enrollments in colleges and universities have increased steadily from 1.1 million in 1930 to nearly 2.8 million in 1955.

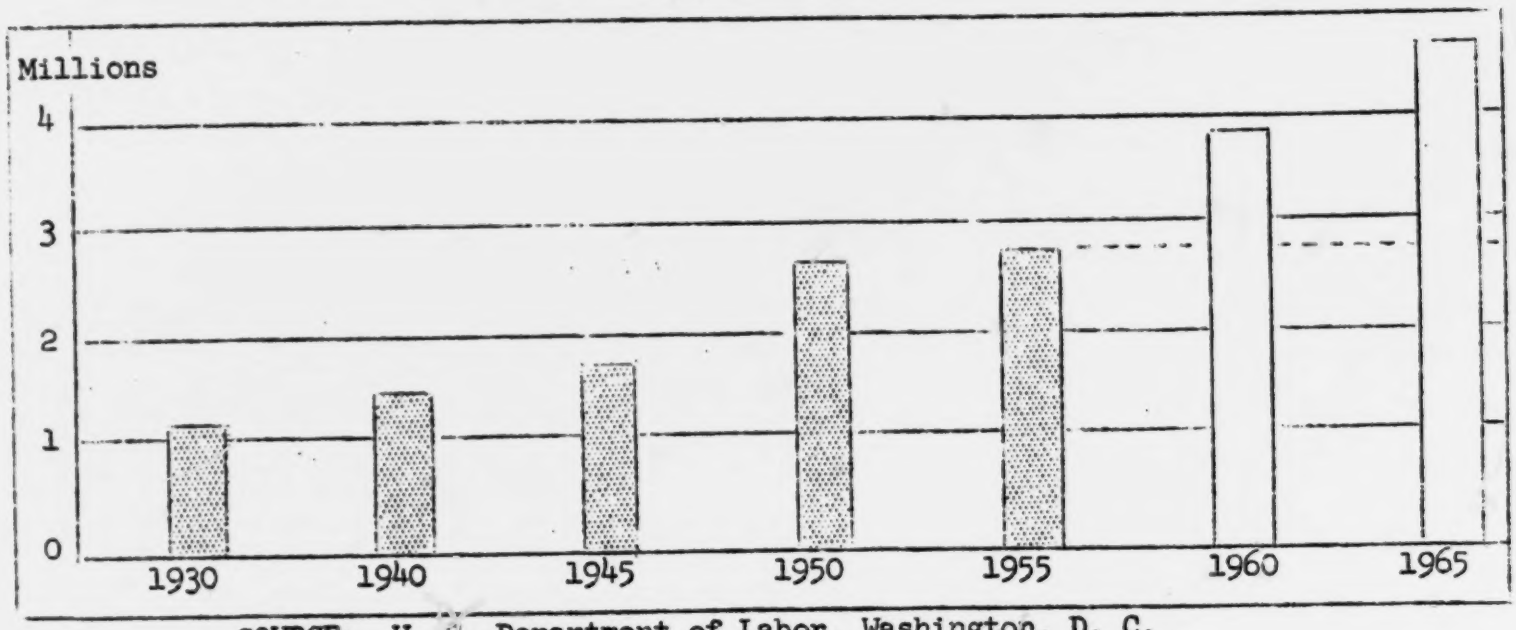
Despite this increase in enrollment - only 4 out of every 11 high school graduates who are qualified go to college.

By 1965 enrollments in institutions of higher education are expected to rise to 4.9 million - a 75 percent increase over 1955.

Vocational and adult education, in its role in higher education in training semi-professional people, will be confronted with the problem of increased enrollments. The need for qualified teachers and adequate facilities will be some of the major problems in the demand for training a quality skilled labor force.

CHART 7

HIGHER EDUCATION INSTITUTION ENROLLMENTS. 1930-65



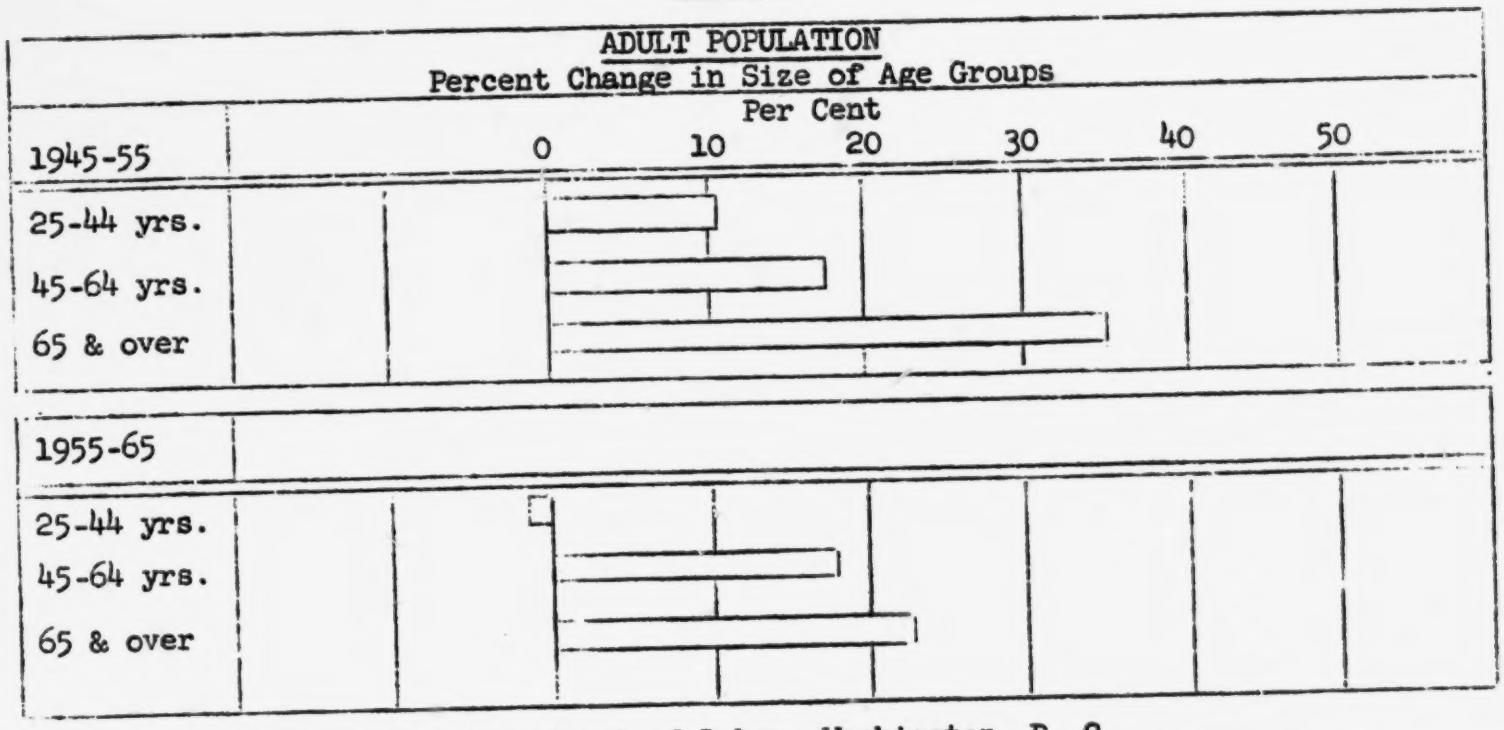
SOURCE: U. S. Department of Labor, Washington, D. C.

Increased life expectancy and the low birth rates of the 1930's are bringing about significant changes in the age composition of our adult population.

As Chart 8 shows, there will be a decrease in the next decade in the age group between 25 and 44 years of age, but the number of persons in the 46 to 64 age group has risen from 28.6 million in 1945 to 33.4 million in 1955 - nearly 17 percent. During the next 10 years another 17 percent increase is indicated.

The increasing proportion of our population in the older age groups has important implications for our labor force. There are many problems that are to be considered as important to the welfare of our state and country, such as production of goods and services and the social and economic problems that come with retirement. However, a big problem will be the retraining and upgrading of many of these older people to be employable in this future technological age.

CHART 8



SOURCE: U. S. Department of Labor, Washington, D. C.

Before considering the size and kind of labor force we are likely to have in 1965, we should consider several significant trends in labor force participation rates which have developed in recent years.

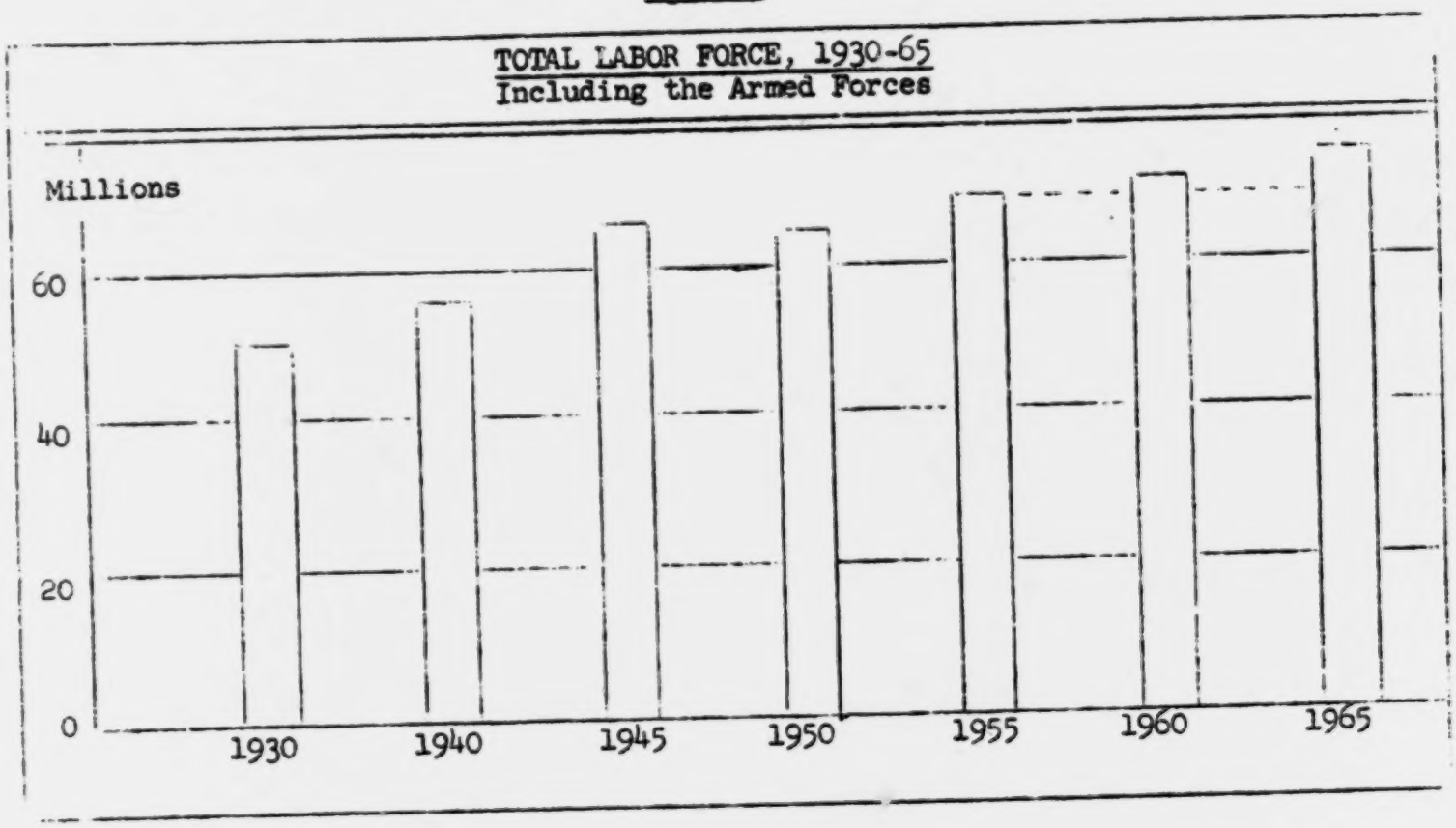
1. The number of years of formal schooling for our youth has been increasing. This tends to reduce the number of young people employed, although many work on a part-time basis while enrolled in school.
2. In 1940 about one out of every four women (14 years of age and over) was in the labor force. In 1955 the ratio was one out of three.
3. There is a trend toward earlier retirement made possible by the extension of public and private pension systems.

On the basis of recent trends and assuming a prosperous peacetime economy, the United States can reasonably expect to have a total labor force of approximately 79.2 million in 1965 - an increase of 10.3 million over 1955.

We must depend on this size labor force to staff our schools, businesses and factories, and maintain our armed forces.

The question can be asked: Will the individuals in our labor force be qualified to perform the work which will be required? Our schools should be prepared to train for quality as well as quantity.

CHART 9



At the present time 7 out of every 10 persons in our labor force are men. During the next 10 years the number of men is expected to rise by 5 million - from 48 million to slightly less than 53 million.

The largest increase (2.7 million) will be in the 14-24 year age group, young men entering the labor force for the first time.

The next largest increase will be in the 45-54 year age group (1.3 million) and the 55 years and over group (1 million).

In 1955 there were 20.9 million women in the labor force. By 1965 there will be 26.2 million. Here again, most of the anticipated increase of 5.4 million will be women in the younger and older age groups.

In vocational education, this means there will need to be an expansion of the pre-employment training in sub-professional fields for boys and girls graduating from high schools and retraining and upgrading for those 45 years and over now employed in the skilled labor force.

CHART 10

MEN IN THE LABOR FORCE

Change in Size of Age Groups, 1955-65

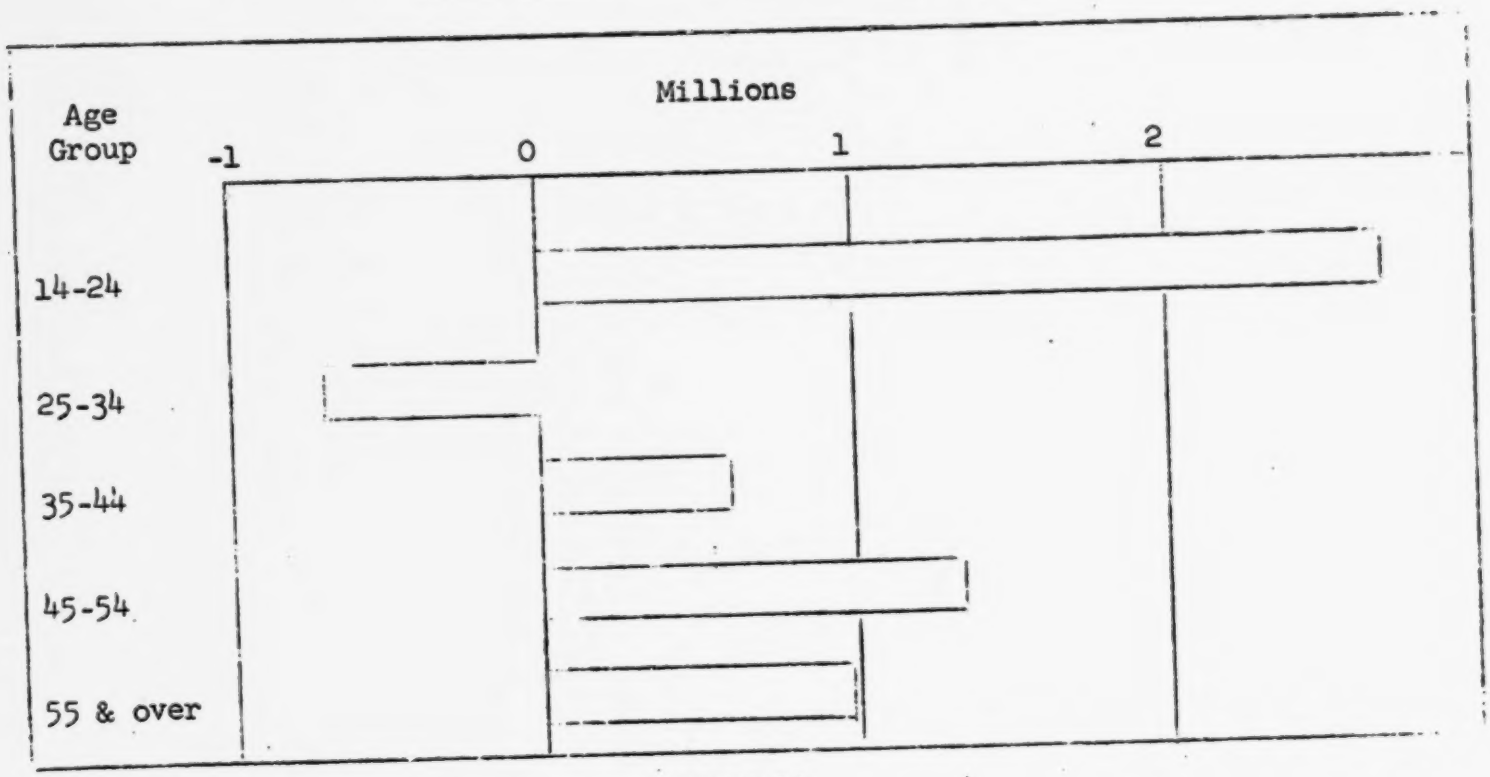
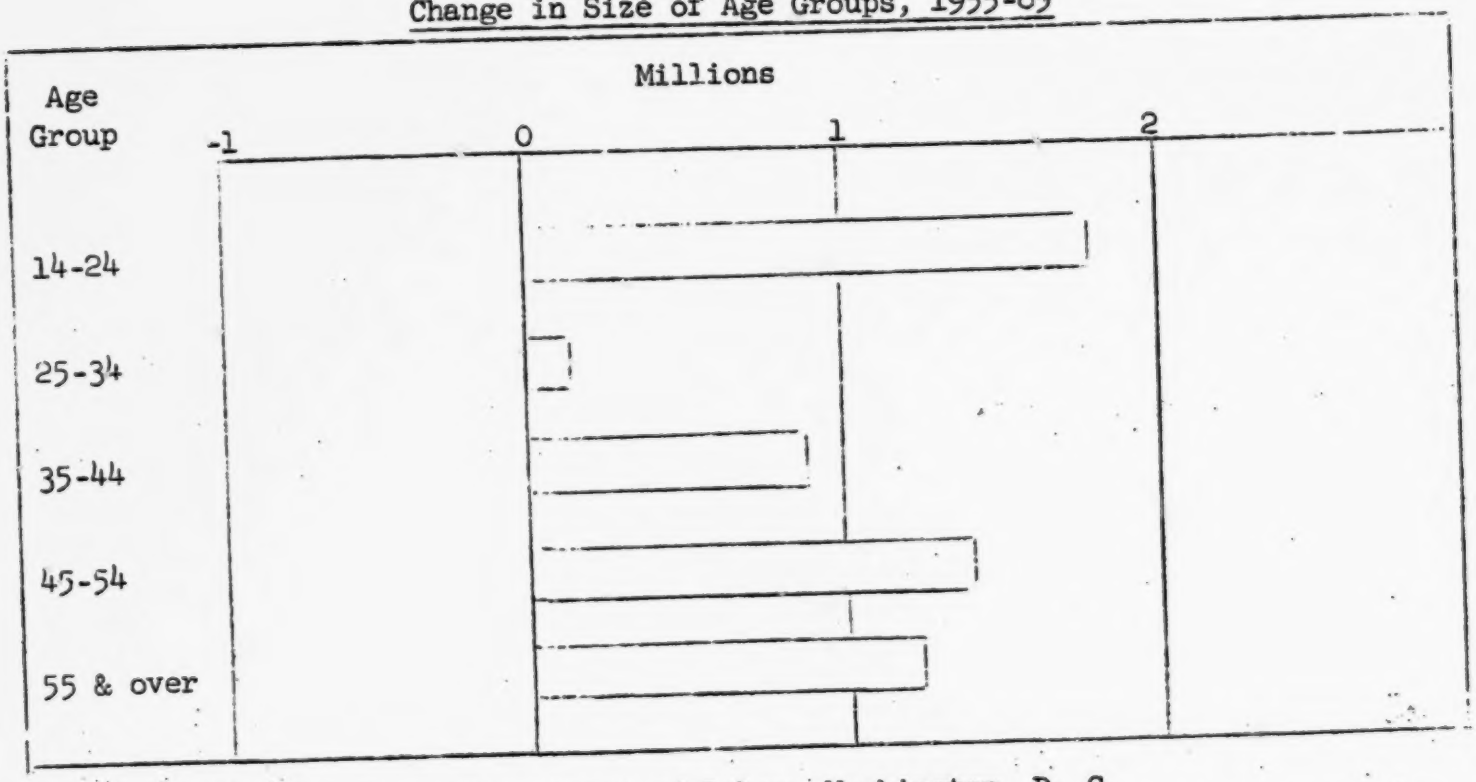


CHART 11

WOMEN IN THE LABOR FORCE

Change in Size of Age Groups, 1955-65



SOURCE: U. S. Department of Labor, Washington, D. C.

Assuming a continuation of the basic trends which have been operating in this country during the first half of this century, we expect to see the following changes in the relative importance of the broad occupational groups of which our labor force is composed.

Professional and Technical - a great demand for this group of scientists, engineers, and technicians. An increase of about one-third in 1965 appears likely.

Proprietors and managers - an increase of over one-fifth is indicated.

Clerical and Sales - an increase of about one quarter because of the need for record keeping and distribution services to support the future huge economy.

Craftsmen and Operatives - This large group of skilled and semi-skilled workers are needed to man our factories, build our homes, roads and buildings - an increase of about one quarter.

Service Workers - There will be a need for many more personal and protective services - an increase of between 10 and 15 per cent.

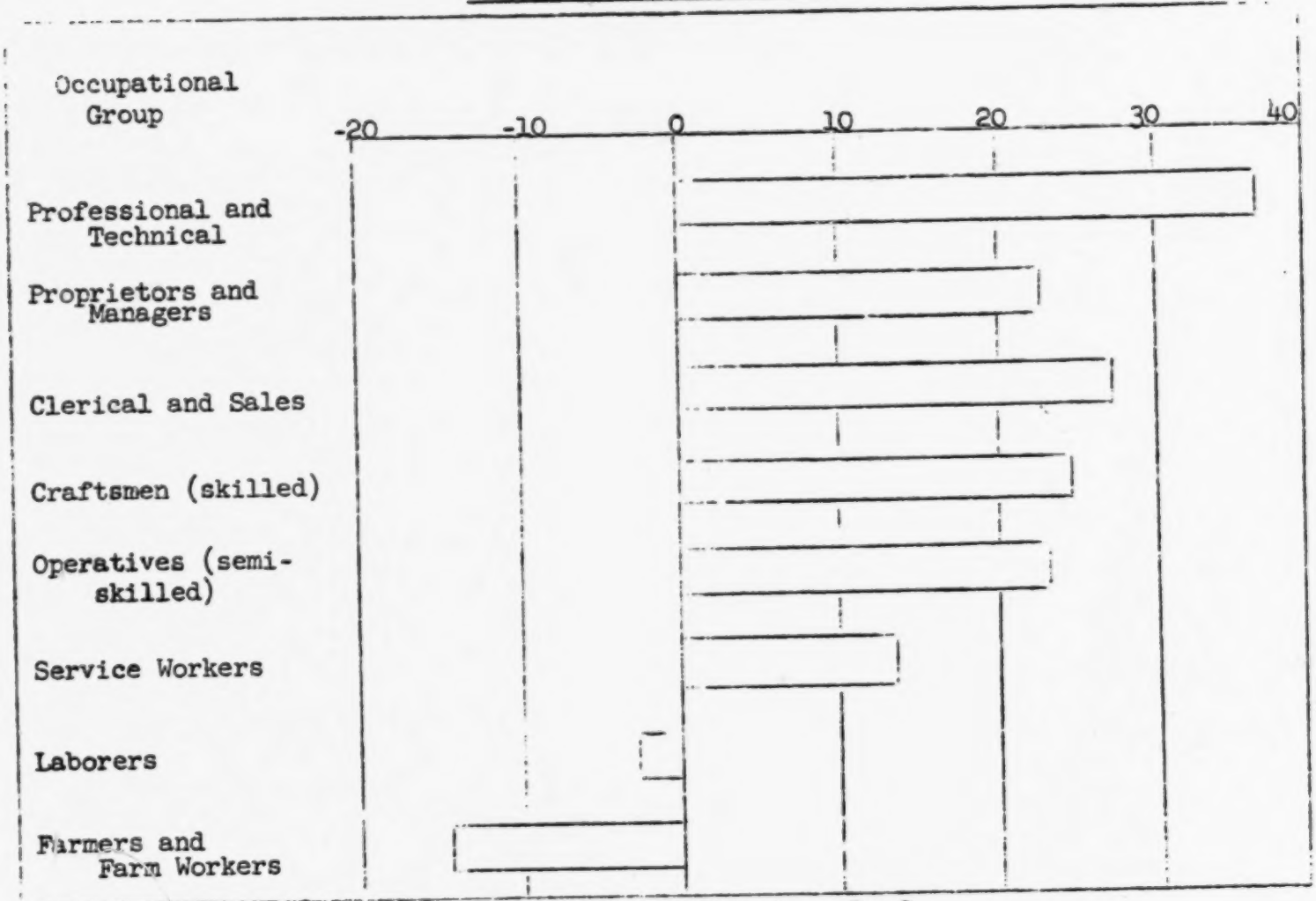
Laborers - Unskilled jobs will decline.

Farmers and Farm Workers - The decrease in farm population has been evident for many years and will undoubtedly continue. Because of great strides in productivity, through the use of machinery, chemicals in agriculture and scientific farming methods, fewer people are needed to produce the food and fibers required by a growing population.

CHART 12

EMPLOYMENT IN MAJOR OCCUPATIONAL GROUPS

Per Cent Change, 1955-65



SOURCE: U. S. Department of Labor, Washington, D. C.

CONCLUSIONS: The next decade presents a challenge which, if met with foresight and intelligent planning can result in the most prosperous period the Nation has every known.

The economic strength of this or any nation depends to a large extent on the skill, initiative and creativeness of its people. Population growth will provide a labor force that is <u>numerically</u> adequate to meet future labor requirements - but we must make a conscious effort to develop the <u>quality</u> of our labor force.

Because of the low birth rates in the 1930's, we can expect no significant increase in the 25-44 year age group during the next ten years. It should be evident, therefore, that we must develop the skill and versatility of the limited supply of workers in these age groups to their highest potential.

Nearly half of the increase in the labor force over the next decade will be in the 14-24 year age group. These are the boys and girls (5-15 years of age) who today are in the elementary grades and early years of high school. By providing the best possible guidance, education and training for these youngsters in the immediate years ahead, we can insure their entrance into the labor force as well adjusted, qualified and competent workers.

Between 1955 and 1965 the number of workers in our labor force who are 45 years or older will increase by nearly five million. We must plan to fully utilize and retrain, if necessary, these mature members of our work force.

The fact that women will constitute better than half of the anticipated 10 million increase in the labor force over the next 10 years demands that we provide more opportunities for them to acquire skill and plan to utilize more of them in the many occupations in which relatively few are employed today.

Our nation's goal should be:

To achieve an adequate, skilled and versatile work force.

To promote equal opportunity for all qualified individuals to acquire skill.

The facts of the past and projections for the future and most of the interpretations used in this part of the report have been assembled by a number of Federal agencies and presented in a Chart Book entitled, Our Manpower Future - 1955-65, U. S. Department of Labor, Washington, D. C. 1957.

THE MANPOWER FUTURE IN WISCONSIN

Since no adequate recent review of manpower needs for Wisconsin is available, it will be necessary to use, as much as possible, national figures as a base for determining the general position the state occupies in the life of the nation.

Here, again, as is true of the national picture, in planning for education in the future, it is significant to consider trends and developments of our manpower resources in Wisconsin.

Population in the United States in July 1, 1956 was 168 million. Wisconsin had a population of 3,729,300.* The United States population is expected to increase to 193.3 million by 1965. Wisconsin's can be expected to increase proportionately in the next decade. The estimates of population gains and losses through interstate migration for Wisconsin in the past have been generally well balanced and it can be assumed that this will hold fairly true in the future. Marshall and Orman, rural sociologists of the University of Wisconsin, in a report of Wisconsin's future population say that the increase will be 612,000 or nearly 17 per cent in the next 20 years. The population by residence in 1955 was 3,691,000 and will rise to 4,303,000 by 1975.**

Increase in elementary and high school enrollments in Wisconsin follow the pattern on a national basis. (This data is available from the Wisconsin State Department of Public Instruction.) The great flow of youth out of secondary schools into schools of higher education will mean careful planning in post high school programs of education.

* Source: Sales Management. Survey of Buying Power. May 10, 1957.

** Source: Wisconsin's Future Population. Allan Orman and Douglas Marshall, Wisconsin Academy Review. 1956.

According to national figures, 1965 enrollments in institutions of higher education are expected to rise about 75 per cent over 1955.*

Vocational education enrollments will be expected to rise in accordance. Projected enrollments are based on a study of enrollments for the past along with a number of assumptions. Those assumptions being, (1) as stated above, increased enrollments in all institutions of higher learning, (2) no great change in population in the state due to in-migration or out-migration, (3) a continued peacetime economy, and (4) the increasing interest of industry, labor, education, and the general citizenry in post-high school terminal vocational-technical education.

In emphasizing assumption number 4, importance to this type of program has been highlighted at various times in the last few years.

The report of the Commission on the Improvement of the Education System on Vocational Education in Wisconsin, March, 1949, stated as follows:

> "A major function provided by the vocational school today is that of providing an educational opportunity for the student who desires specific vocational training when he has completed high school. The student does not desire a four-year college course nor professional training, but still requires training in addition to that provided by the high school course. Stenography, business machine operation, practical nursing, bookkeeping, radio repairman, etc. are illustrations of these courses. It may involve a full day program for as much as two years, or only part-time courses for a relatively short time."

This report made additional references to the need for developing an organized program of post high school education in this state and pointed out

* Source: Our Manpower Future - 1955-65. U. S. Department of Labor, Washington, D. C. 1957.

that schools of vocational and adult education were in many instances adapted to meet this responsibility.

The first interim report of the President's Committee on Education Beyond the High School, issued in November, 1956, Washington, D. C., stated in part in the preliminary conclusions:

> "The needs of the oncoming millions of individuals with varying capacities and interests will call for a broader range of educational opportunities, and less rigid time requirements. Plans for the expanded educational system that is needed cannot be developed solely on the popular belief that the four year college is the only standard of value of education beyond the high school. The needed range of educational opportunities will, among other things, include extended secondary school work for some, apprenticeship for others, two year general study programs for many, two year technical training for subprofessional positions, four year liberal arts courses for still others, professional preparation for many, and a wide variety of adult education programs....."

The report of the Survey for Post High School Education in the Lake Shore Area of Wisconsin made by the American Council on Education several years ago devoted an entire chapter to the part which schools of vocational and adult education may play in providing terminal technical education programs in this state.

During hearings held in Washington in 1955 before the Committee on Economic Stabilization on "Automation and Technological Change," testimony presented by representatives of labor and management emphasized the importance of additional training facilities in order that new workers might be upgraded

or retrained for new job assignments.

Many of the witnesses before the Committee called upon vocational education to develop programs which will train technicians to meet the new needs of industry brought on by technological change.

The bulletin entitled Higher Education in Wisconsin, published by the League of Women Voters of Wisconsin, in 1956, on the phase of the study on vocational education commented as follows:

> "In the absence of such programs as those offered by junior college systems in other states, these schools fill a need for post-high school terminal education of a technical nature for which there is no alternative in Wisconsin."

These assumptions on increased enrollments in the future have already become a reality. An increasing number of high school graduates are enrolling in many of the vocational and adult schools for post high school training in business and industrial fields which will prepare them for employment in more complex technological economy. Many local schools have waiting lists of students desiring to enroll in technical courses. And local schools generally have met the challenge of increasing enrollments and are attempting to "tool up" in preparation for the future needs even though changes in state law have not kept pace with the increased needs being met by the schools.

An inspection of the data in the following tables reveals the enrollments in vocational education in the United States and Wisconsin.

On the basis of population data gathered by the U. S. Department of Labor, Washington, D. C., we can assume certain things about Wisconsin's labor force:

1. There will be a greater per cent rise in adult population in the older age groups.
2. The total labor force will increase proportionately as to the increase of 10 million in the next years in the United States.
3. About half of this increase in Wisconsin will be women.
4. The greatest change of men and women in the labor force will be in the 14-24 year age group and in the 45 year and over age group.

To keep up its pace with the economy of the nation, Wisconsin will have to prepare to expand in its educational facilities for the pre-employment training and retraining of its older workers. Adult education for better living will be essential also.

Chart 12, on employment in major occupational groups in the United States, shows a decided increase in all groups with the exception of laborers and farmers and farm workers. Chart 13, on changes in employment in major occupation groups in Wisconsin from 1940 to 1950, is quite comparable to the 1955 to 1965 national employment changes. Projections to 1965 for Wisconsin were not available at the time of this report, but, if we can take some license in making appraisal on the basis of national projections and the increased change in employment in Wisconsin from 1940 to 1950, and if there is a continuation of the basic trends which have occurred since the Korean War, we can safely say that there will be a decided percentage increase in most occupational groups of which vocational education is furnishing educational services.

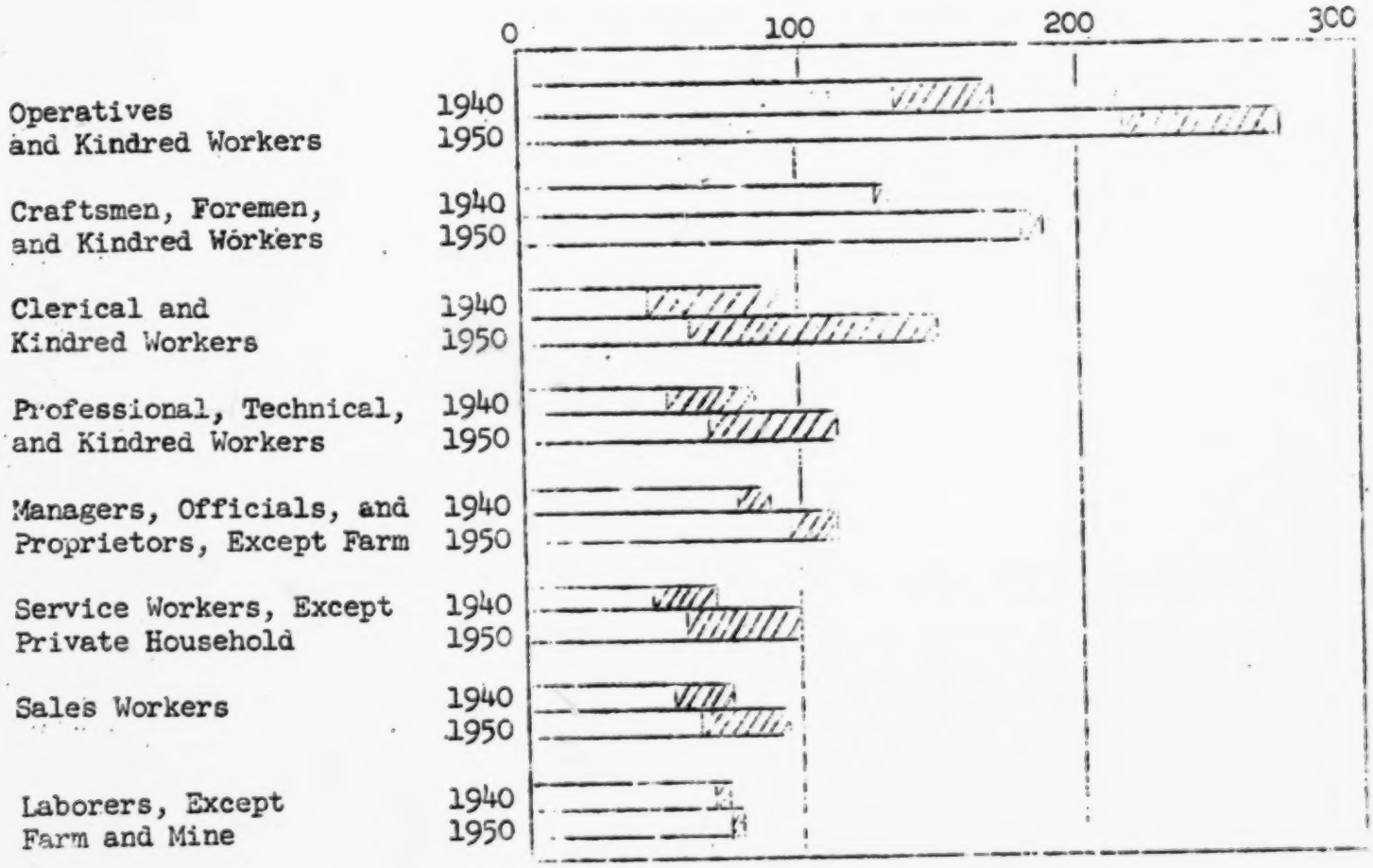
Wisconsin faces the same problems generally as the nation as a whole, that of providing a quality labor force within the population growth.

CHART 13

CHANGES IN EMPLOYMENT IN MAJOR OCCUPATION GROUPS, 1940-1950

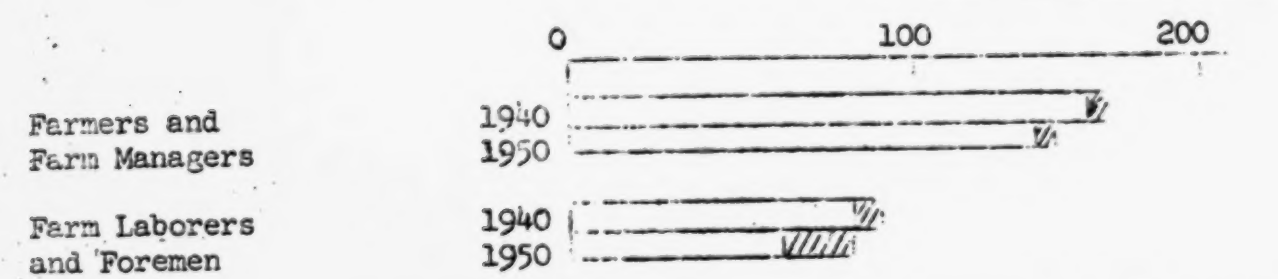
Wisconsin

These groups grew in number between 1940 and 1950: Thousands of Workers



These groups declined:

Thousands of Workers



Source: U. S. Department of Labor, Bureau of Labor Statistics

Total Employed, 1940* 1,060,408		Total Employed, 1950* 1,354,554	
Men	Women	Men	Women
829,322	231,086	995,125	359,429

*Occupations not reported included. U.S. Bureau of Census

ENROLLMENT TRENDS
SCHOOLS OF VOCATIONAL AND ADULT EDUCATION

There are four distinct groups served by local schools of vocational and adult education. These include:

1. Compulsory aged youth who are compelled through the provisions of section 40.77 of the statutes to attend school for one day each week one-half time or full-time.
2. Indentured apprentices who under the provisions of section 106.01 of the statutes must attend school for at least four hours each week or the equivalent.
3. High school graduates and students 18 years of age or more who attend school half-time or full-time on a voluntary basis in order to prepare for a specific occupation.
4. Other adults who attend school in the day time or evening less than half-time to improve their skills, prepare for employment or improve themselves for social or civic life.

The enrollment of compulsory aged youth in schools of vocational and adult education has decreased in recent years. During the school year 1951-52 the number of 11,571 such youth were enrolled in schools of vocational and adult education. During the school year 1955-56 the enrollment of these youth was in the number of 8,469.

Despite the decreasing enrollment of compulsory aged youth in recent years it is estimated that the number enrolled during the next decade will be approximately the same as at the present time (8,000 to 8,500).

The number of children enrolled in the elementary schools is increasing annually and an increasing percentage will attend full time high schools. However it is believed that the number who will enroll in schools of vocational

and adult education will be 8,000 to 8,500 each year.

It is believed that the number of indentured apprentices served by local schools of vocational and adult education will increase by 100 each year beginning with an enrollment of 4,239 in 1954-55. The peak enrollment of of indentured apprentices was reached after World War II when approximately 8,500 per year received related instruction in local schools of vocational and adult education.

The enrollment of students who are high school graduates or 18 years of age or over attending school on a voluntary basis one-half time or full-time, has greatly increased during recent years.

In 1951-52 the enrollment of these students was 4,275. During 1954-55 this enrollment had increased to 5,899. It is estimated that the enrollment of these students will increase each year by 300 individuals.

The number of other adults who are attending school less than half-time for day or evening instruction has increased from 91,059 enrolled in 1951-52 to 98,997 enrolled in 1954-55. It is estimated that these enrollments will increase by 2,000 each year.

Year	Number of Compulsory Students	Number of Apprentices	Post High School	Adult
1954-55	9,038	4,239	5,899	98,997
1955-56	9,038	4,339	6,199	100,997
1956-57	9,038	4,439	6,499	102,997
1957-58	9,038	4,539	6,799	104,997
1958-59	9,038	4,639	7,099	106,997
1959-60	9,038	4,739	7,399	108,997
1960-61	9,038	4,839	7,699	110,997
1961-62	9,038	4,939	7,999	112,997
1962-63	9,038	5,039	8,299	114,997
1963-64	9,038	5,139	8,599	116,997
1964-65	9,038	5,239	8,899	118,997
1965-66	9,038	5,339	9,199	120,997

FINANCING THE PROGRAM

The original law in 1911 provided for state aid in an amount not to exceed $10,000 for any city, town or village establishing a school. The local school was reimbursed for 50% of the expenditures made, subject to the maximum grant of $10,000 for any one city, town or village.

The 1915 session of the legislature provided that payment of state aid might not exceed $20,000 for a city of the first class, nor more than $10,000 for any other city, town or village.

The 1917 legislature directed the State Board to prorate state aid if the total appropriation was insufficient to meet all claims.

The 1921 session of the legislature amended the law providing that state aids be reimbursed in amounts equal to one-half the sum actually expended for salaries for instruction and supervision, and limited the total reimbursement to any city of the first class to $30,000 and to $15,000 for any other city, town or village.

The 1921 legislature also increased the annual appropriation of state aid for schools of vocational and adult education to $255,000 annually.

The 1943 session of the legislature increased state aid to $420,000 annually which appropriation has been made available by each succeeding session of the legislature.

The following table indicates the payment of state aid for schools of vocational and adult education since 1913:

Year	Total Disbursements*	Total Cost of Instruction	State Aid
1913-14	$ 288,975.28	$ 158,722.24	$ 93,125.35
1914-15	379,300.22	228,745.06	125,894.29
1915-16	587,562.12	278,925.69	138,760.19
1916-17	514,366.02	314,820.96	139,701.72
1917-18	697,149.49	312,493.96	139,750.00
1918-19	980,253.04	368,416.30	139,750.00
1919-20	1,225,935.25	491,934.84	185,000.00
1920-21	1,710,257.52	680,008.44	184,521.38
1924-25	2,251,438.98	1,271,550.22	255,000.00
1929-30	3,179,037.62	1,584,555.18	255,000.00
1934-35	2,627,517.16	1,628,103.23	255,000.00
1939-40	3,447,215.60	2,120,470.53	255,000.00
1944-45	3,593,652.50	2,093,196.90	420,000.00
1948-49	6,783,520.31	3,458,223.77	420,000.00
1954-55	8,792,482.73	4,584,991.73	420,000.00

* Does not include new building costs

It will be noted from the above table that state aid reimbursements in 1913-14 were in the amount of approximately 32% of the total disbursements and approximately 58% of the cost of instruction.

In 1920-21 state aid reimbursements were in the amount of approximately 11% of the total disbursements and approximately 27% of the cost of instruction.

In 1944-45 state aid reimbursements were in the amount of approximately 12% of the total disbursements and approximately 20% of the cost of instruction.

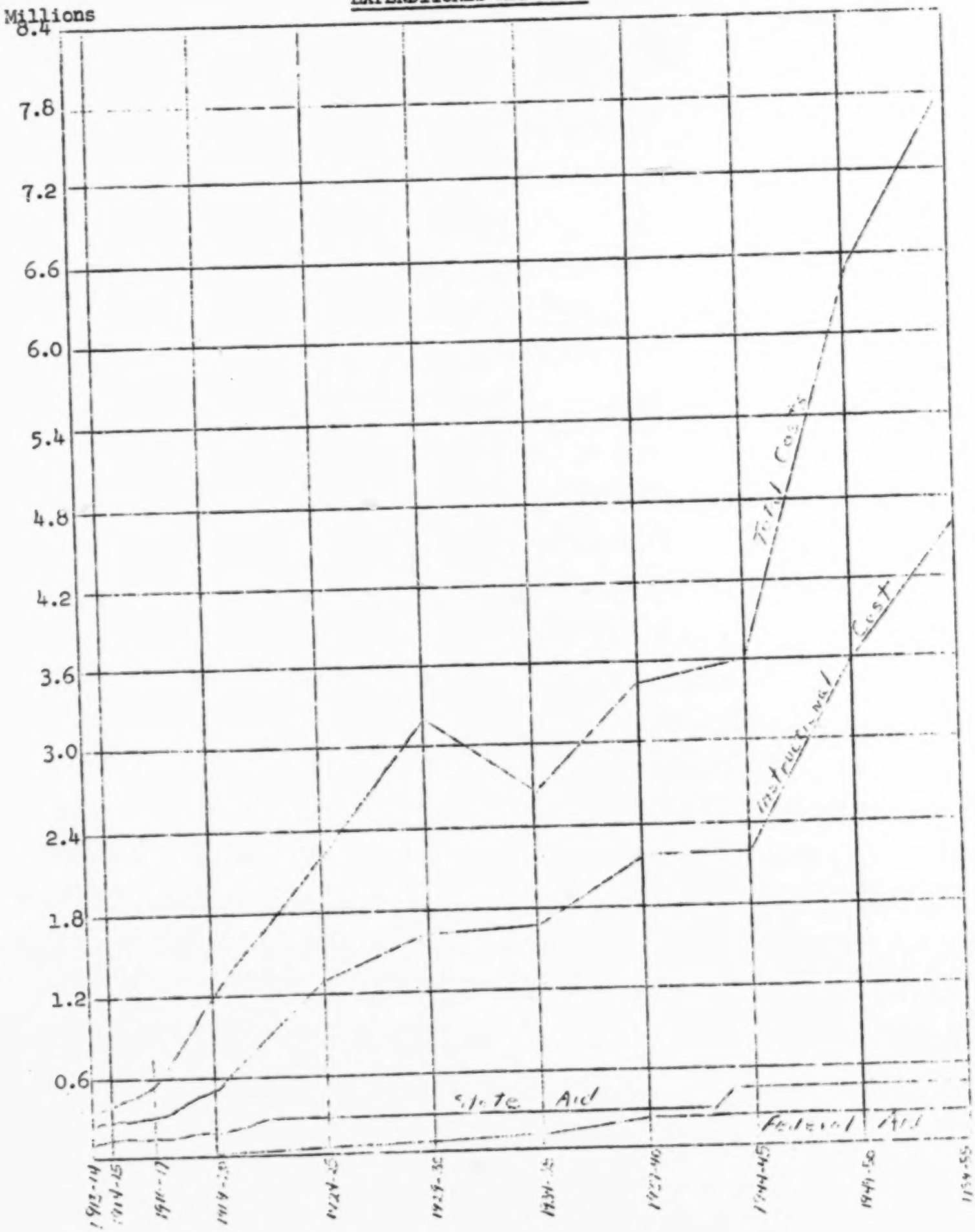
In 1954-55 state aid reimbursements were in the amount of approximately 5% of the total disbursements and approximately 9% of the cost of instruction.

During this same period state support of other publicly supported education activities has been greatly increased.

In recognition of the importance of vocational education to our national economy, federal aids have been increased. Chart 14 entitled "Expenditures and Aids" points out in a graphic manner the degree to which state support has failed to keep pace with the increased costs of the program.

CHART 14

EXPENDITURES AND AIDS



The state aid appropriated, $420,000 annually, is insufficient to meet the claims submitted by the several local boards of vocational and adult education.

In accordance with state law, state aids have been prorated and the city of the first class annually receives approximately $20,000 in state aid while other cities may annually receive a maximum of approximately $10,000.

The maintenance of the existing programs of vocational and adult education and the development of new training programs to meet new demands being made to the schools of vocational and adult education will require an increased financial participation by the state.

The language of the basic law indicates that it was the intention of the legislature to share in large measure the support of these local schools of vocational and adult education. This is indicated by the share of state support during the early years of the program. Although the basic laws have not been changed, the share of state support has steadily decreased.

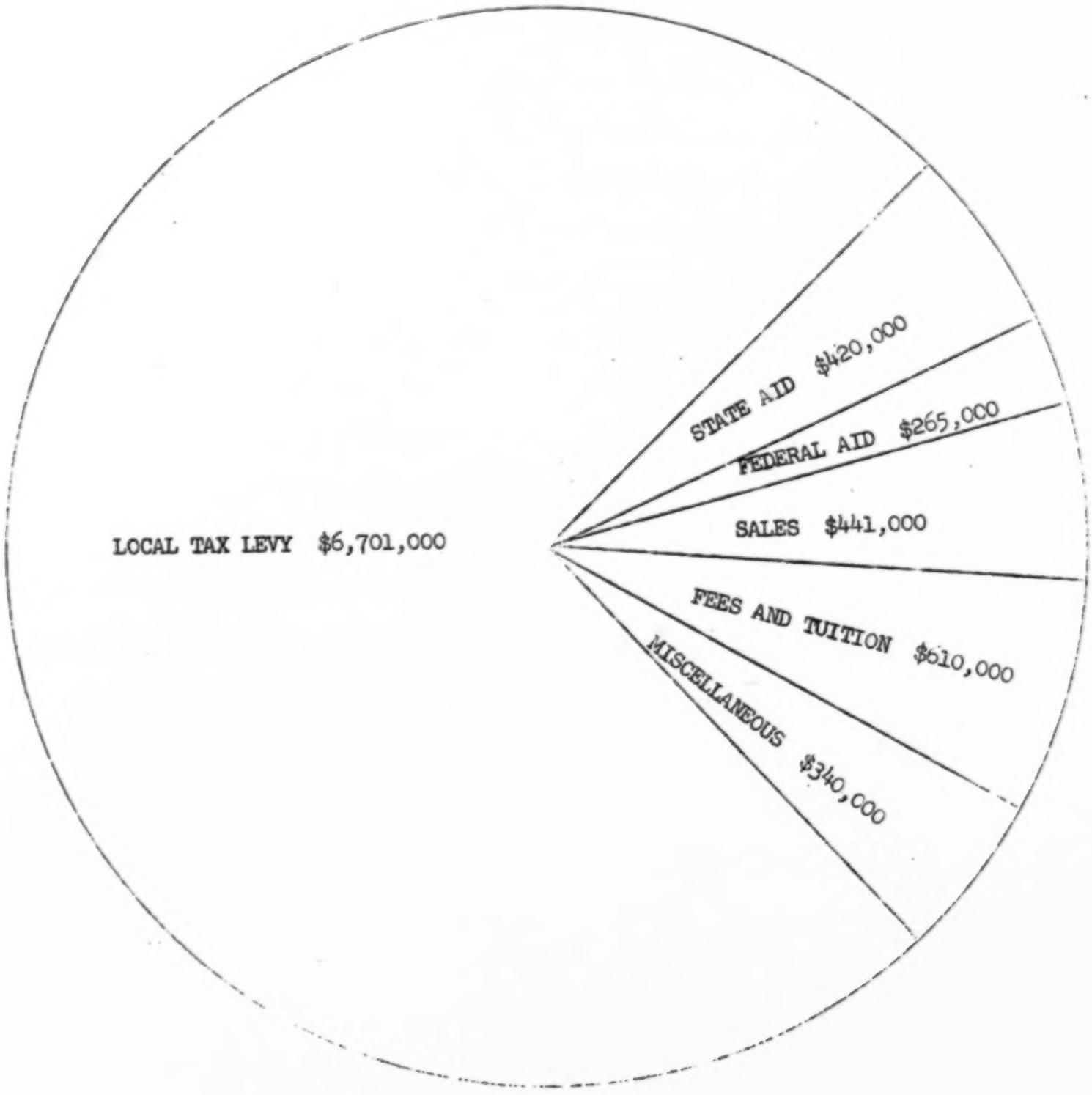
At the present time the major support for the system of vocational and adult education comes from local taxes. Chart 15 entitled "Sources of Expenditure Wisconsin Schools of Vocational and Adult Education" illustrates that local tax levies provided $6,701,000 of the support for the program during the school year 1955-56. State aid was reimbursed in the amount of $420,000 and federal aid totaled $265,000.

CHART 15

SOURCES OF EXPENDITURE

WISCONSIN SCHOOLS OF VOCATIONAL AND ADULT EDUCATION

TOTAL $8,777,000



Local Tax Levies

The original law which established the system of vocational and adult education in 1911 also provided for fiscal independence of local boards of vocational and adult education. The original law established the mill tax levy for the support of these schools in an amount not to exceed one-half mill on the assessed valuation. Subsequently the law was revised by raising the maximum amount to three-fourths mill, one and one-half mills and in 1947 to two mills. The law prior to 1947 established the mill tax levy as an over-all maximum. In 1947 the law was amended by providing that levies for debt service and retirement were in addition to those made for purposes of operation.

It is interesting to note that the total amount levied for purposes of vocational and adult education has not at any time equalled the total potential levy. In some years the levy has been as low as 60% of the possible tax rate. In individual cities the full amount has occasionally been levied but other cities have levied much less than the amount permitted under state law.

VOCATIONAL AND ADULT EDUCATION AND EDUCATION BEYOND THE HIGH SCHOOL

Several references have been made to the increasing numbers of high school graduates who are enrolling in schools of vocational and adult education. These students in most cases are enrolling in one and two year courses which will prepare them for special and technical responsibilities in our expanding economic system. The impact of a rapidly expanding technology requires more workers who have training beyond high school in order that positions of a technician character may be filled in business and industry. A number of schools during the past year have had waiting lists of students desiring to enroll in such courses which have been filled to capacity.

A book recently issued by the Education Policies Commission entitled "Manpower and Education" makes the following statement regarding these expanding needs:

> "Merging into the engineering fields are a number of occupations arising from technological developments. The uncertain border line between these fields and engineering adds to the confusion of the manpower shortage. Under the stimulus of technological advance, many new semi-professional occupations are emerging. Examples of these semi-professions are readily apparent in connection with the rise of the air-conditioning industry, Diesel motors, electronically operated elevators, and the newer computing machines. Such occupations require more than a trade training and something less than full professional training. Many of them have not yet been defined to the point where educational programs can be readily set up for them. The urgent demands and the lack of men and women qualified as technicians and specialists in these semi-professional fields have contributed to the shortages of engineers, by drawing some men into positions for which they are more than adequately trained. Under-use of trained talent itself contributes to manpower shortages."

The role of vocational and adult education in developing education and training of this type was envisioned many years ago. This is illustrated in the following quotations from a bulletin issued in May, 1921 by Dr. Edward A. Fitzpatrick, Director of the State Board of Education entitled

"Technical and Trade Training Through the Continuation School." In a section entitled "Institutions To Serve Entire State" the following comments were made:

> "The tendency of industries to become centralized in certain localities and the present extent and rapid growth of the industries included in this discussion raise the question of the advisability of developing in connection with the vocational schools already established, of specialized trade training schools in these centers, as, for example, a paper-making school at Appleton, a mining trade school at Platteville, etc. That is, would it not be wise and for the best interests of the state industrially and for the best interests of the workers in these great industries to establish special technical schools as type schools and to serve, not only the local community, but the whole state and the whole industry wherever located in the state. Unquestionably such a group of technical and trade schools, organized on a basis broad enough to offer complete training in the industry from both the production and managerial standpoints, and operated in close correlation with the actual industry, preferably on a cooperative plan of alternate weeks in shop and school, whereby the students would be able to support themselves while learning the industry, would be of permanent value and would soon demonstrate the wisdom of special state aid for their establishment and maintenance as departments of the regular vocational schools.
>
> "As the beginning for such a program for specialized trade training for Wisconsin, we would suggest the establishment, under the fostering care of the State Board of Vocational Education, of schools or departments in the cities of Appleton, Racine, Sheboygan, Platteville, Madison, Milwaukee, and Superior. These are the natural industrial and commercial centers of the state. There is no purpose in this study of excluding the other important cities of the state. It is not going to be possible even to consider all of these in detail. But in order to show the possibilities of the plan we are outlining the possibilities of a paper-making technical school at Appleton, a building trades technical school at Madison, and a mining trade school at Platteville. The State Board of Vocational Education will undoubtedly want to make more detailed studies of its own for this development of technical schools. Our purposes are frankly suggestive and for the purpose of getting the movement for technical training started on the basis of a plan for the whole state."

In a later section, the bulletin made the following comments:

> "The organization of these specialized technical schools, so located as to serve their respective industries most advantageously, would unquestionably be a forward step in industrial and vocational training and in adult education in Wisconsin. Their establishment would involve no additional machinery of control, either state or local, as they should by all means be established as a department of the already operating vocational and continuation schools of the cities concerned. Although under the local boards of industrial education and under the general

> direction and oversight of local directors of vocational education, they should be organized as distinct departments of the local vocational schools and operated as a special unit with rooms, equipment, and a teaching staff largely, but not entirely, for their exclusive use.
>
> "In the organization of the work and course of study, directors, and teachers must not be hide-bound with traditions either of the industries themselves or of ordinary academic educational institutions. Since schools of this type must necessarily be planned to serve a much wider field than the city in which they are located, must in fact, be planned and operated to serve the industry in the state at large and all men of all parts of the state who desire that particular kind of technical training, they should be free to all citizens of the state, irrespective of residence except for incidental and laboratory fees. In their support, the state, through the State Board of Vocational Education, should bear a much larger part than the ordinary vocational school has."

The above quotations strengthen the belief that responsibilities envisioned for the program of vocational and adult education included the development of technical training programs which would meet the demands for technicians and specialists in semi-professional fields together with educational services to be rendered on an area or statewide basis.

Schools of vocational and adult education are municipal institutions but in recent years have served an increasing number of students who are nonresidents of the communities in which the schools are established. Attention is called to the table entitled "Nonresident Students Served in 1955-56."

WISCONSIN SCHOOLS OF VOCATIONAL AND ADULT EDUCATION
NON-RESIDENT STUDENTS SERVED IN 1955-56

Table A

Location of School	Compulsory Age 14-16	Voluntary Age 17-20	Apprentices	Total Number Over 21 Day School	Total Number Over 21 Even. School	Total
Antigo	11	6	1		181	199
Appleton	18	71	106	146	502	843
Ashland		6	5	32	74	117
Beaver Dam	3	1	19	23	56	102
Beloit	25	29	93	789	691	1,627
Chippewa Falls	7	7		8	216	238
Cudahy	8	8	3	115	68	202
Eau Claire	9	170	98	64	341	682
Fond du Lac	25	36	73	119	342	595
Fort Atkinson	2	3	8	155	280	448
Green Bay	23	104	94	171	414	806
Janesville	4	18	12	46	169	249
Kaukauna	33	7	4		222	266
Kenosha	28	59	55	40		182
Kimberly			12	7	19	38
La Crosse	26	108	61	47	475	717
Madison	14	151	176	335	626	1,302
Manitowoc	17	24	33	63	235	372
Marinette	4	3	11	93	77	188
Marshfield		29	6	12	73	120
Menasha		11	35	95	122	263
Merrill	18	19			83	120
Milwaukee	55	226	101	400	902	1,684
Neenah		27	30	64	104	225
Oshkosh	2	7	29	16	245	299
Port Washington	1	3	5		598	607
Racine	36	83	87	202	338	746
Rhinelander	21	16	7	57	81	182
Rice Lake	10	34	19	38	134	235
Sheboygan	8	30	60	119	295	512
South Milwaukee	7	7	26		55	95
Stevens Point	34	10	7	19	100	170
Stoughton				131	102	233
Sturgeon Bay	13	18	7	21	43	102
Superior	2	42	12	50		106
Two Rivers	3	6	5	30	103	147
Watertown	6	8	17	10	50	91
Waukesha	6	41	59	134	608	848
Wausau	38	109	47	290	350	834
West Allis	22	34	76	238	573	943
West Bend	23	18	32		249	322
Wisconsin Rapids	29	6	10	21	614	680
TOTALS	591	1,595	1,541	4,200	10,810	18,737

A specific analysis of the area service of the Eau Claire School of Vocational and Adult Education indicates that 64 nonresidents were enrolled in the day program and 188 in the evening school program, who were over 21 years of age. In 1955-56 this school enrolled 169 students 17-21 years of age who were residents of communities located in 22 neighboring counties.

The Wausau School of Vocational and Adult Education served 290 nonresidents in the day school program and 350 nonresidents in the evening school program who were 21 years of age or over. In 1955-56 the school served 109 students who were 17-21 years of age and resided in communities located in 16 counties in the central part of the state. These were not compulsory aged students or indentured apprentices but high school graduates enrolled in one or two year programs of a post high school character designed to prepare for technical responsibilities. The courses included residential design, electronics, radio and television repair and servicing, drafting, business education, etc.

In recognition of area services of a post high school character rendered by schools of vocational and adult education, Governor Thomson sponsored legislation which authorized the establishment of area vocational school districts. This legislation has been incorporated in Chapter 224 of the Laws of 1957 and interest has already developed for the establishment of area vocational school districts to serve sections of the state where schools are not established.

In order that sound minimum standards are assured in technical training programs established in the local schools, the State Board of Vocational and Adult Education has adopted standards for the evaluation and approval of technical one and two year training programs in the industrial and business

education fields. These standards are based upon the pattern which has been established by the Engineering Council for Professional Development and incorporate minimum provisions for equipment, curriculum, physical facilities and teachers qualifications. The bulletins are entitled: "Technical Institute Program - Business Education" and "Technical Institute Programs - Industrial Education."

During the past year minimum standards were developed and approved by the State Board in business education and automotive technology. Minimum standards in electronics technology have been completed and will be considered by the State Board at an early date. Members of the state staff together with a committee of local teachers are presently developing the minimum standards for a program in mechanical technology.

Attention has been called to the small share of state support presently available for programs of vocational and adult education. This small share of support applies to all programs including the one and two year technical courses which are being established to meet the needs for education beyond the high school.

The bulletin published by Dr. Fitzpatrick recommended that the state, through the State Board of Vocational Education, bear a much larger part of the support of such programs than was true of ordinary vocational school offerings.

Many schools of vocational and adult education have excellent buildings and other facilities. The present facilities, if adequately supplemented by additional laboratories, can be effectively utilized to assist in meeting the impact caused by an increasing enrollment of high school graduates who desire additional education and training.

Recent surveys indicated that many high school graduates are interested in enrolling in schools of vocational and adult education. A survey conducted by the Eau Claire School of Vocational and Adult Education in 1956 reveals an unusual interest in schools of vocational and adult education by high school seniors in the surrounding area.

The attached table indicates the educational interests of 1956 high school seniors who were enrolled in 25 high schools in the Eau Claire Vocational School area. It will be noted that 822 out of a total of 1669 high school seniors were interested in training programs available through a school of vocational and adult education.

Attached to this report is a copy of the bulletin issued by the Milwaukee School of Vocational and Adult Education entitled "Milwaukee Institute of Technology."

Attention is also called to a student questionnaire which was presented to two-year technical students by the Wausau School of Vocational and Adult Education in June 1957. Copies of this questionnaire may be obtained by writing to the Director of the Wausau School of Vocational and Adult Education.

Copies of the survey conducted by the Eau Claire School of Vocational and Adult Education on the interests of high school graduates in that area of the state and referred to in this section, may be obtained by writing to the Director of the Eau Claire School of Vocational and Adult Education.

CONCLUSION

It is hoped that this report has given information regarding the role of vocational and adult education in our state. An attempt has been made to relate the training opportunities in the schools of vocational and adult

education to the present and future manpower needs of our state.

In summary, the Wisconsin schools of vocational and adult education are developing an educational service which is comparable in many of its aspects to those offered in states which have established junior college systems.

The programs of vocational education are being organized on a dignified post high school level in order that the manpower needs of an expanding technological society may be met through intense one and two year training programs. In establishing these new activities the schools are continuing to provide the traditional services which have always been available to out-of-school youth and adults who are interested in improving themselves so that they may more adequately meet their social, civic and economic responsibilities.

EDUCATIONAL INTERESTS OF 1956 HIGH SCHOOL SENIORS IN 25 HIGH SCHOOLS
EAU CLAIRE VOCATIONAL SCHOOL AREA

School	Total Seniors	Interested in College	Interested in Vocational Training	Undecided as to Training	VOCATIONAL FIELDS OF INTEREST: Interested in Office Occupations	Interested in T & I Occupations	Interested in Miscellaneous Occupations
Alma Center	29	3	18	8	5	7	14
Altoona	13	2	9	2	3	7	1
Augusta	40	11	21	8	9	10	10
Blair	34	6	21	7	10	13	5
Bloomer	58	16	21	21	16	8	18
Cadott	45	10	23	12	10	10	15
Chippewa Falls	149	44	73	32	31	40	34
Clear Lake	22	3	15	4	6	5	8
Colfax	47	8	28	11	21	11	7
Cornell	54	17	32	5	13	13	11
Durand	54	16	19	19	14	15	9
Eau Claire	367	124	159	84	80	75	88
Fairchild	15	4	7	4	5	2	4
Fall Creek	24	3	15	6	6	9	6
Maiden Rock	14	3	8	3	3	5	3
Menomonie	105	36	49	20	25	21	23
Mondovi	64	14	44	6	13	16	21
Neillsville	66	12	36	18	20	19	15
Osseo	50	8	41	1	13	19	10
Owen	77	27	42	8	20	14	16
Prentice	37	9	13	15	7	11	10
Regis High School	99	41	40	18	20	22	16
Rice Lake	103	47	33	23	19	14	23
Stanley	62	15	32	15	14	22	11
Thorp	41	10	23	8	12	12	7
TOTALS	1669	489	822	358	395	400	385